Inventor: Kuhl et al. Appl. No.: 10/654,169

**Amendments to the Claims:** 

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended): A method for continually adjusting the separating

out of winnowings in cigarette making from usable tobacco particles in the manufacture of

smokable products, wherein:

a) detecting the current size distribution of a stream of tobacco particles passing a

measuring point, per unit of time[[,]] is detected; and

b) is compared comparing the size distribution with a settable nominal size distribution;

and

c) continually adjusting an arrangement for separating the winnowings, depending on the

result of said comparison.

Claim 2 (Previously Presented): The method as set forth in claim 1, wherein said

smokable products are cigarettes.

Claim 3 (Original): The method as set forth in claim 1, wherein the current size

distribution of a stream of separated winnowings, of a stream of usable tobacco particles and

winnowings or of a stream of usable tobacco particles alone is detected and compared with a

corresponding, settable nominal size distribution.

Claim 4 (Original): The method as set forth in claim 1, wherein said current size

distribution is determined by detecting the dimensions of the tobacco particles in the transport

direction at said measuring point.

Claim 5 (Original): The method as set forth in claim 4, wherein the dimensions of the

tobacco particles are detected using a fine-beam light barrier.

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Claim 6 (Previously Presented): The method as set forth in claim 5, wherein the

volume or the mass flow rate of the tobacco particles passing the measuring point is determined

by detecting the dimensions of the tobacco particles in the transport direction.

Claim 7 (Withdrawn): The method as set forth in claim 1, wherein the current size

distribution and the nominal size distribution are compared on the basis of their peaks or the

overall area of the corresponding curve.

Claim 8 (Withdrawn): The method as set forth in claim 1, wherein the current size

distribution and the nominal size distribution are compared on the basis of the ratio between the

size distributions for the winnowings and for the usable tobacco particles.

Claim 9 (Previously Presented): The method as set forth in claim 1, wherein the spatial

position of the arrangement for separating the winnowings is adjusted, depending on the result of

said comparison.

Claim 10 (Previously Presented): The method as set forth in claim 9, wherein an impact

sheet serves as the arrangement for separating the winnowings and is continually adjusted using

an electric motor.

Claim 11 (Original): The method as set forth in claim 10, wherein said impact sheet is an

impact metal sheet.

Claim 12 (Original): The method as set forth in claim 10, wherein said electric motor is a

servo or step motor.

Claim 13 (Previously Presented): The method as set forth in claim 10, wherein said

electric motor is directly attached to said impact sheet.

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Claim 14 (Previously Presented): The method as set forth in claim 10, wherein said

electric motor is coupled to said impact metal sheet via Bowden wire connections, said impact

sheet being biased into a defined position via springs.

Claim 15 (Withdrawn): The method as set forth in claim 9, wherein the stream of air

serving to separate an initial stream of tobacco particles into the usable particles and winnowings

is adjusted, depending on the result of the comparison.

Claim 16 (Withdrawn): The method as set forth in claim 15, wherein the stream quantity

or the pressure of the stream of air is adjusted.

Claim 17 (Withdrawn): The method as set forth in claim 9, wherein the velocity of the

conveying medium for the stream of tobacco particles is adjusted, depending on the result of the

comparison.

Claim 18 (Withdrawn): The method as set forth in claim 17, wherein cylinders,

belts or streams of air are used as said conveying medium.

Claim 19 (Withdrawn): The method as set forth in claim 18, wherein the velocity of

the stream of air serving as the conveying medium for winnowings is adjusted by changing the

stream quantity or the pressure.

Claim 20 (Original): The method as set forth in claim 1, wherein the nominal size

distribution is determined by detecting the change in the ratio of the size of the winnowings to the

size distribution of the usable tobacco particles and optimizing said ratio by adjusting the

arrangement for separating the winnowings.

Claims 21-23 (Canceled)

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Claim 24 (Currently Amended): A method for separating winnowings in cigarette making

in an air flow comprising:

generating a size distribution of a tobacco particle stream;

comparing said size distribution with an optimal size distribution;

continually adjusting said size distribution of said tobacco particle stream using a

separation unit the functioning of which is based upon said comparing step.

Claim 25 (Previously Presented): The method of Claim 24 wherein said generating of

said size distribution of said tobacco particle stream is conducted on a tobacco particle stream of

winnowings and finer lamina tobacco particles.

Claim 26 (Previously Presented): The method of Claim 24 wherein said size

distribution is created by detecting an average individual particle size of said tobacco particle

stream.

Claim 27 (Previously Presented): The method of Claim 26 wherein said generating of

said size distribution is completed using a fine beam light barrier.

Claim 28 (Previously Presented): The method of Claim 24 wherein said size

distribution of said tobacco particle stream and said optimal size distribution are compared on the

basis of an area of each individual size distribution.

Claim 29 (Withdrawn):

The method as set forth in Claim 24 wherein said comparing

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Claim 30 (Withdrawn): The method of Claim 24 wherein said size distribution of a

tobacco particle stream is compared to said optimal size distribution on the basis of a ratio

step is conducted based on a comparison of the peaks of each of said size distributions.

between a size distribution for winnowings and a size distribution of larger tobacco lamina

particles.

Claim 31 (Previously Presented): The method of Claim 24 wherein said separation

unit is an impact sheet and further comprising adjusting said impact sheet to separate particles in

said tobacco particle stream.

Claim 32 (Previously Presented): The method of Claim 31 further comprising biasing

said impact sheet into a pre-defined position for proper separation of said tobacco particle stream.

Claim 33 (Currently Amended): A method of separating tobacco particles <u>in cigarette</u>

making from a particle stream, comprising:

measuring a size distribution of a tobacco particle stream containing winnowings

and finer tobacco particles;

comparing said measured size distribution to an optimal size distribution;

continually adjusting an impact sheet within a cigarette maker, said impact sheet

located within said particle stream;

separating finer tobacco particles in said particle stream from winnowings by said

continual adjustment of said impact sheet.